



\$207,520
Total project cost



\$155,000
CF-LRP funding



\$52,520
co-contribution



66,500
Projected ACCUs

Undanooka Soil Carbon Project

David and Marnie Mackie

Location	Koojan (New Norcia), WA	 Agricultural Productivity	 Soil Health
Project area	1,600 ha		
Property size	2,500 ha		
Permanence period	25 years		

Aims

- The Undanooka Soil Carbon Project aims to boost productivity by improving the health of the farm's agricultural soils, improving ground cover for increased soil bacterial and fungal biomass, moisture retention, and building root biomass.
- By transitioning away from high-input fertiliser cropping regimes to a more diverse and biologically active farming system, the project will help to build a more ecologically sustainable and resilient farming system.



Above: Compost being prepared for distribution across Undanooka Farm, 2022..

Activities

- The team will take a scientific approach, trialing new management practices and inputs monitored for their impact on soil carbon.
- Initial trials will involve the addition and incorporation of manures and compost into the top 40cm of soil in one part in the project area.
- Introduce legume species as a sub-storey intercrop using an air-seeder, planting serradella and clover under canola and co-cultivating canola with lupins in selected areas to fix nitrogen and increase root mass diversity
- Incorporate manures and compost into the top 40cm of soil in trial areas to stimulate soil carbon sequestration and improve soil biological activity
- Increase ground cover to protect soil biology from extreme temperatures and retain moisture through the soil profile
- Monitor and adapt management practices based on research findings and practical on-farm observations to drive continuous improvement of soil carbon levels over the 25-year permanence period
- Co-cultivation of vetch (legumes) and oats across 1,600ha will be scaled up over 4 years.